

Remarks

Claims 1-20 are pending in the application and were rejected. By this Amendment, claim 7 has been amended. Reconsideration of the claims is respectfully requested. No new matter has been added.

Rejection Under 35 U.S.C. § 103

Claims 1-20 were rejected under § 103(a) as being unpatentable over U.S. Patent No. 5,717,135 issued to Fioletta et al. (hereinafter "Fioletta '135") in view of U.S. Patent No. 5,814,725 issued to Furuichi et al. (hereinafter "Furuichi '725"). Applicants respectfully believe that a *prima facie* case has not been established for the reasons discussed below.

A *prima facie* case has not been established for the rejection of claim 1. Claim 1 recites "a sensor assembly mountable on the wheel, the sensor assembly including a first sensor for detecting a tire parameter and *a second sensor for detecting proximity of the sensor assembly to the wheel* based on the position of the second sensor relative to the wheel." Fioletta '135 does not recite a second sensor for detecting proximity of a sensor assembly to a wheel. Instead, Fioletta '135 discloses a pressure sensing device 1300 "that is adapted to produce differing amounts of magnetic flux near the cover 1324 in proportional relationship to the pressure of air within the tire" (column 13, lines 62-65). Furuichi '725 does not cure the deficiencies of Fioletta '135. Indeed, Furuichi '725 does not disclose or remotely suggest any sensor that detects proximity of a sensor assembly to a wheel. Moreover, neither Fioletta '135 nor Furuichi '725 discloses a sensor assembly having both first and second sensors as claimed. Therefore, a *prima facie* case has not been established and the rejection of claim 1 must be withdrawn. Since claims 2-9 depend on claim 1 the rejection of these claims is believed to be overcome for the same reasons.

Even if a proper rejection could be established for claim 1, a *prima facie* case has not been established for the rejection of claim 3. Claim 3 recites "first and second sensors are mounted on a circuit board." In the Office Action, the Examiner stated that pressure sensor

assembly 129 was a first sensor and that hall effect sensor 1502 was a second sensor (see Office Action, page 2). The Examiner then pointed to Fioletta '135, column 6, lines 41-48 for support. Column 6, lines 42-45 state that "a pressure sensor assembly 129 is mounted within an integrally formed circular opening of body 103." However, there is absolutely no disclosure of a second sensor or a circuit board as required by claim 3. Thus, a *prima facie* case has not been established and this rejection must be withdrawn.

Similarly, a *prima facie* case has not been established for the rejection of claim 4. Claim 4 recites "a protective cover disposed around the first and second sensors." In the Office Action, the Examiner stated that pressure sensor assembly 129 was a first sensor and hall effect sensor 1502 was a second sensor (see Office Action, page 2). Moreover, the Examiner stated that cover 105 was disposed around first and second sensors (see Office Action, page 3). However, hall effect sensor 1502 is not associated with cover 105. Instead, hall effect sensor 1502 is spaced apart from the inside rim 1600 of each wheel and is not associated with any cover (column 14, lines 49-50). As such, there is absolutely no disclosure of a protective cover as required by claim 4. Therefore, a *prima facie* case has not been established and this rejection must be withdrawn.

A *prima facie* case has not been established for the rejection of claim 6. Claim 6 recites "a hall effect sensor that *detects detachment of the sensor assembly from the wheel* based on the position of the second sensor relative to a magnet positionable proximate to the wheel." As discussed above in reference to claim 1, hall effect sensor 1502 detects tire pressure, not detachment of a sensor assembly from a wheel. As such, a *prima facie* case has not been established and this rejection must be withdrawn.

Applicants also note that the Examiner stated that claim 7 would be allowable if rewritten in independent form (i.e., claim 7 was objected to, not rejected). Since claims 8 and 9 depend on claim 7, these claims should receive similar treatment.

A *prima facie* case has not been established for the rejection of claim 10. Claim 10 recites “a sensor assembly *mountable on the tire*, the sensor assembly including a first sensor for detecting a tire parameter and a second sensor for *detecting proximity of the sensor assembly to the tire* based on the position of the second sensor relative to the tire.” Fioletta ‘135 does not disclose or remotely suggest any sensor assembly associated with a tire. In the Office Action, the Examiner stated that reference number 1502 was a second sensor “for detecting proximity of the sensor assembly to the wheel” (see Office Action, page 2). Furuichi ‘725 does not cure the deficiencies of Fioletta ‘135. Indeed, the Examiner stated that Furuichi ‘725 “teaches a tire pressure detecting apparatus mounting a sensor assembly ... directly to the wheel” (see Office Action, page 2). Moreover, neither Fioletta ‘135 nor Furuichi ‘725 discloses a sensor assembly having both first and second sensors as claimed. Consequently, a *prima facie* case has not been established and the rejection of claim 10 must be withdrawn. Since claims 11-17 depend on claim 10, the rejection of these claims must be withdrawn for the same reasons.

Even if a proper rejection could be established for claim 10, a *prima facie* case has not been established for the rejection of claim 12. Claim 12 recites “first and second sensors are mounted on a circuit board.” In the Office Action, the Examiner stated that pressure sensor assembly 129 was a first sensor and that hall effect sensor 1502 was a second sensor (see Office Action, page 2). The Examiner then pointed to Fioletta ‘135, column 6, lines 41-48 for support. Column 6, lines 42-45 state that “a pressure sensor assembly 129 is mounted within an integrally formed circular opening of body 103.” However, there is absolutely no disclosure of a second sensor or a circuit board as required by claim 12. Thus, a *prima facie* case has not been established and this rejection must be withdrawn.

Similarly, a *prima facie* case has not been established for the rejection of claim 13. Claim 13 recites “a protective cover disposed around the first and second sensors.” In the Office Action, the Examiner stated that pressure sensor assembly 129 was a first sensor and hall effect sensor 1502 was a second sensor (see Office Action, page 2). Moreover, the Examiner stated that cover 105 was disposed around first and second sensors (see Office Action, page 3).

However, hall effect sensor 1502 is not associated with cover 105. Instead, hall effect sensor 1502 is spaced apart from the inside rim 1600 of each wheel and is not associated with any cover (column 14, lines 49-50). As such, there is absolutely no disclosure of a protective cover as required by claim 13. Therefore, a *prima facie* case has not been established and this rejection must be withdrawn.


A *prima facie* case has not been established for the rejection of claim 14. Claim 14 recites “a hall effect sensor that *detects detachment of the sensor assembly from the wheel* based on the position of the second sensor relative to a magnet positionable proximate to the wheel.” As discussed above in reference to claim 1, hall effect sensor 1502 detects tire pressure, not detachment of a sensor assembly from a wheel. As such, a *prima facie* case has not been established and this rejection must be withdrawn.

A *prima facie* case has not been established for the rejection of claim 18. Claim 18 recites a “sensor assembly including a pressure sensor for sensing air pressure in the tire and an attachment sensor.” The attachment sensor “is configured to *detect attachment of the sensor assembly to the chamber surface* based on the position of the attachment sensor relative to the magnet.” In the Office Action, the Examiner stated that pressure sensor assembly 129 was a first sensor and that hall effect sensor 1502 was a second sensor (see Office Action, page 2). As previously discussed, hall effect sensor 1502 detects tire pressure, not detachment of a sensor assembly from a wheel. Furuichi ‘725 does not cure the deficiencies of Fioletta ‘135. Indeed, Furuichi ‘725 does not disclose or remotely suggest any sensor that detects proximity of a sensor assembly to a wheel. Moreover, neither Fioletta ‘135 nor Furuichi ‘725 discloses a sensor assembly having both pressure and attachment sensors as claimed. Consequently, a *prima facie* case has not been established and the rejection of claim 18 must be withdrawn. Since claims 19-20 depend on claim 18, the rejection of these claims must be withdrawn for the same reasons.

Conclusion

Applicants have made a genuine effort to respond to the Examiner's objections and rejections in advancing the prosecution of this case. Applicants believe all formal and substantive requirements for patentability have been met and that this case is in condition for allowance, which action is respectfully requested.

Respectfully submitted,
CALVIN MODAWELL et al.

By 
Matthew M. Mietzel
Reg. No. 46,929
Attorney for Applicant

Date: February 2, 2005

BROOKS KUSHMAN P.C.
1000 Town Center, 22nd Floor
Southfield, MI 48075-1238
Phone: 248-358-4400
Fax: 248-358-3351